

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

PETER A. HOCHSTEIN, et al,

Plaintiff's

Case Number: 04-73071

v.

HONORABLE PAUL D. BORMAN

MICROSOFT CORPORATION,

Richard D. Grauer, Special Master

Defendant.

**SPECIAL MASTER'S FURTHER REPORT AND RECOMMENDATION
ON CONSTRUCTION OF PATENT CLAIM 39**

INTRODUCTION

Background

This Report and Recommendation is pursuant to the Court's Order of Appointment and Reference to me as Special Master, dated June 25, 2009 (Dkt. No. 479), concerning the parties' most recent request for claim construction of Claim 39 of U.S. Patent No. 5,292,125 (the "125 Patent"). The current claim construction dispute involves the terms "video game," "electrically connected" and "channel."

My earlier claim construction Report and Recommendation of May 16, 2009 (Dkt. No. 367), construed four other claim 39 claim limitations: "video game communication circuit," "microprocessor," "player port logic circuits," and "communication couplers." That Report was adopted by the Court on June 22, 2009 (Dkt. No. 471). A still earlier Report and Recommendation by Special Master Paul M. Janicke's (Dkt. No. 257, dated January 26, 2007) construed claim 39 terms "filtering,"

“voice over data circuit,” and “communication signals.” The Court adopted that Report as well (Dkt. No. 241, dated October 25, 2007).

It should be noted at the outset that the disputed term “channel” does not appear in claim 39, or anywhere else in the ‘125 Patent. The present need for its construction arises because Special Master Janicke employed that term as part of his construction of the claim term “voice over data circuit” (Dkt. No. 257, ¶8). The Court adopted that construction for the jury on June 23, 2009. The parties disagree on what Special Master Janicke meant by “channel” in Paragraph 8.

The full text of claim 39 appears in the Addendum to this Report, with the two disputed terms shown in bold italics. Microsoft’s and Hochstein’s¹ briefs on the construction of these three terms will be referred to simply as “Dkt. 477” and “Dkt. 478,” as the context will make it clear which party’s brief is referenced.

Summary of Recommendations

1. “Video game” in claim 39 should be construed to mean: “A game run by a dedicated computer that has been hardwired with built-in permanent circuitry for the specific purpose of running games that use a video screen for a visual output. This “dedicated” computer is to be contrasted with a general purpose computer, such as a typical home personal computer or laptop computer. The computer may, but need not, be capable of performing other tasks.”
2. “Electrically connected” in claim 39 should be construed to mean: “Joined by an electrically conductive connector or a capacitor, as distinguished from being joined merely through electromagnetic induction or waves.

¹ I shall refer to the Plaintiffs as “Hochstein.”

3. With regard to the term “channel” in Paragraph 8 of Special Master Janicke’s Report (Dkt. 257), I recommend that: “Channel” simply be replaced by “medium,” and that no formal construction of “channel” be conveyed to the jury. Alternatively, if the Court is not inclined to modify Paragraph 8 of the previously adopted Janicke Report, I recommend that “channel” be construed to mean: “A path for conveying electrical or electromagnetic signals.”

DISCUSSION

For convenience, I have inserted the following two sections from my preceding Report and Recommendation.

Basic Guidelines for Patent Claim Construction

The Court “has the power and obligation to construe as a matter of law the meaning of language used in a patent claim” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff’d* 517 U.S. 370 (1996). The words of a claim “are generally given their ordinary and customary meaning” that they would have to a person of ordinary skill in the art at the time of the effective filing date of the patent application. *Phillips v. AWH Corporation et al*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (*en banc*).

The primary sources to be considered for claim construction are found in the “intrinsic” evidence, which consists of the patent claims themselves and the specification and prosecution history of the patent. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). “Extrinsic” evidence, which includes expert and inventor

testimony, dictionaries and learned treatises, “may be helpful to explain scientific principles, the meaning of technical terms and terms of art that appear in the patent and prosecution history.” *Markman*, 52 F.3d at 980. Although extrinsic evidence may be used to aid the court’s understanding of the patent, it may not be used to vary or contradict the clear meaning revealed by the intrinsic evidence. *Id.* at 981; *Vitronics*, 90 F.3d at 1584-85.

Among the types of extrinsic evidence, preference should be accorded to technical dictionaries as an aid in construing technical terms. *Phillips*, 415 F.3d at 1318. See also, *Vitronics*, 90 F.3d at 1580 n.6 (“Although technical treatises and dictionaries fall within the category of extrinsic evidence, as they do not form a part of an integrated patent document, they are worthy of special note”), and *AFG Industries, Inc. v. Cardinal IG Co., Inc.*, 239 F.3d 1239, 1247-8 (Fed. Cir. 2001)(“A general dictionary definition is secondary to the specific meaning of a technical term as it is used and understood in a particular technical field”).

Brief Description of the Subject Matter

The ‘125 Patent discloses a video game that permits two or more players to play the game together, without being located at the same site. Conventional video games commonly comprise a single video game computer having one or more ports into which player input controllers are plugged, and from which video and audio signals are sent to a video display, such as a TV set. See, *e.g.*, Figure 1 of the ‘125 Patent. Thus, all participating players must be located at the site of the video game computer.

The system disclosed in the '125 Patent adds a “communicator” or “communications assembly” in electrical communication between one (local) player input controller and the local video game computer. This communicator performs several functions: (1) it receives command signals from the local player input controller and sends them to the local video game controller; (2) it converts those command signals into communication signals to be sent over telephone lines to a second similar communicator connected to a remote video game computer, which has its own remote player input controller; and (3) it receives communication signals from the remote player’s controller and communicator and converts them into command signals representing the remote player’s input commands, for transmission to the local video display. The communicators include voice over data circuitry allowing both communication signals and voice signals to be sent over the interconnecting telephone line simultaneously.

Analysis of the three construction issues follows.

Issue No. 1: “Video Game”

Claim 39 refers to a “local *video game*” having certain elements and a “remote *video game*.”

In the “Background of the Invention” section the '125 Patent specification, the patentees stated their understanding of that commonly used term:

The computer games which are commonly referred to as *video games* are games run by dedicated computers, *i.e.*, computers hardwired for a specific purpose, using a video screen for a visual output. These *video games* are prevalent in the home environment because they can be connected to the television allowing children to play these games in the safety of the home.

‘125 Patent, col. 1, lines 14-20 (emphasis added). As stated in *Phillips, supra*, the patent specification “is the single best guide to the meaning of a disputed term.”² 415 F.3d at 1315. *Phillips* also repeated the well-known rule that “words of a claim are generally given their ordinary and customary meaning,” which is the meaning they would have “to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1312-13. Here, the first sentence of the patentees’ statement is in the nature of a definition, one which appears to set forth the “ordinary and customary meaning” of *video game*. Therefore, it appears to be appropriate for the Court to utilize that sentence, at least as a foundation, for the required claim construction.

Hochstein proposes a simplified version, whereby “*video game*” means “a computer that is specially designed to run video games” (Dkt. 478, p.3, emphasis added).

Microsoft quotes directly from the cited sentence, contending that “*video game*” be construed to mean “games run by dedicated computers, *i.e.*, computers hardwired for a specific purpose, using a video screen for a visual output” (Dkt. 477, p.14, quoting from the ‘125 Patent, 1:14-17).

Both parties, however, present additional contentions in the nature of qualifiers on their proffered claim constructions. Hochstein contends that “[j]ust because an accused device is specially designed to run video games does not mean that it cannot perform some other tasks, too” (Dkt. 478, p.3, case citation omitted). Microsoft asserts that the patentees’ choice of “*i.e.*” (rather than *e.g.*) and the use of “a specific purpose” (Microsoft’s emphasis) in the quoted passage mean that “the patentee defined ‘dedicated

² I have not seen the prosecution history, but Special Master Janicke’s Report (adopted in its entirety by this Court) states that “[t]he claims were allowed on the first office action, and, as usual, the examiner gave no reasons for the allowance.” Dkt. No. 257, ¶23.

computers’ as those hardwired for a single purpose” (Dkt. 477, p.14 emphasis added), “hardwired solely to play video games” (*Id.* at p.16, emphasis added).

The underlying difference in the parties’ positions focuses on what kinds of computers are excluded from a “**video game**” rather than those that are clearly included. The dispute created by their diametrically opposed additional qualifying remarks is not resolved by the “specially designed,” “dedicated,” or “hardwired for a specific purpose” language contained in their proposed claim constructions. The Court’s claim construction must therefore remove any ambiguity as to whether the claimed “**video game**” must be a “single purpose” computer, “hardwired solely to play video games” (as Microsoft contends), or whether it is specially designed to run video games, but may be capable of performing other tasks (as Hochstein contends).

It is appropriate that the Court’s claim construction include both the “dedicated computer” and the “hardwired for a specific purpose, using a video screen for a visual output” phrases, or their equivalent, because those terms were employed by the patentees in their definition. But it is my opinion that the “dedicated computers” or computers “hardwired for *a* specific purpose” phrases do not compel the conclusion that the computer must be incapable of performing any other purpose. “Dedicated” is to be contrasted with “general purpose” (personal computers and laptops are familiar examples of general purpose computers), and “hardwired” means that the computer has permanent circuitry for running games that use a video screen for visual output. A computer could be dedicated and hardwired for more than one stated task, without being a general purpose computer. This conclusion is supported by the testimony of Hochstein’s expert, Dr. Matheson, as discussed below.

The Federal Circuit has rejected Microsoft's contention that the indefinite article "a" as in "*a* specific purpose," is limited to "one":

This court has repeatedly emphasized that an indefinite article "a" or "a" in patent parlance carries the meaning of "one or more" in open-ended claims containing the transitional phrase "comprising" (citation omitted). That "a" or "a" can mean "one or more" is best described as a rule, rather than merely as a presumption or even a convention. The exceptions to this rule are extremely limited: a patentee must "evinced[] a clear intent" to limit "a" or "an" to "one." *Baldwin Graphic Systems v. Siebert*, 512 F.3d 1338, 1342 (2008).

While that rule is stated in the context of claim interpretation, I see no reason why its logic should not apply to the less esoteric and restrictive context of the patent specification. Microsoft has not identified anything in the '125 Patent, other than the single quoted sentence from column 1, lines 14-17, that might be considered as evidence of "a clear intent" by the patentees to limit "a specific purpose" to a single purpose. I found no such intent, either explicit or implicit. No evidence has been provided that suggests any reason that the patentees would have been concerned whether the video game computer might incidentally be capable of performing any additional functions, provided that it was indeed capable of running a video game that used a video screen for a visual output. The video game computer itself was not what the patentees claimed as their invention. The 125 Patent's Summary of the Invention begins with the statement, "A video game communication assembly for communicating command signals between a local video game and at least one remote video game is disclosed" (2:18-20). The video game computers themselves, whatever their construction, were pre-existing and not necessarily altered internally by the patentees' claimed communication circuit. Indeed, as Microsoft stressed in its earlier contention concerning the meaning of "video game communication circuit," the patentees' original prototype placed that circuitry in a

separately housed device that was plugged into the video game console and game controllers.

As the Federal Circuit observed in *Phillips*:

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction."

415 F.3d at 1316 (citation omitted).

Microsoft's selectively quotes from deposition testimony by Plaintiffs' expert (Dr. Matheson) to support its contention that a special purpose video game computer must be incapable of performing any other function (Dkt. 477, pp.16-17; Exh. 7). But I find that a fair reading of the cited deposition pages supports Hochstein's rather than Microsoft's proposed claim construction. In the following section of pages 74-75 provided by Microsoft, the bracketed portions were not quoted by Microsoft:

[Q. So that a special purpose video game computer would be one that could be used only for playing video games?

{objection omitted}

A. No, I wouldn't say it that way.

Q. So what do you think a special purpose video game computer is?

A. I think one of ordinary skill would recognize that there are companies that make video game computers] targeted towards the market of selling games to people who want to play video games in their home [and that that's – you know, computers – **computers can be used to do lots of different things, and so I was responding to the word "only" in your question.]**

Q. Well, suppose that the – that it can be used to do things other than play video games. Is it no longer a special purpose video game computer?

A. I would say it depends upon the primary purpose for which it has been designed and marketed, because as I already stated, the special purpose video game computers are computers, and computers are very fungible. Computers can be repurposed by providing different software. [For example, I noticed recently some manufacturers of television sets are including web browsers in their television set, and they do that because they have a microprocessor in it. **I still would say it's a television set and not a general purpose computer just because it has a computer processor in it.**]

Dkt. 477, Exh.7, 74:4-75:11 (emphasis added).

Furthermore, Microsoft's Exhibit 7 begins with a final fragment of an answer by Dr. Matheson, the gist of which appears to be consistent with the above-highlighted excerpts:

computer is defined to be specifically **a special purpose video game computer**, and that **would not include a PC playing games.**

Id. at 74:1-3 (emphasis added).

In conclusion, I find neither of the parties' proposed claim construction of "**video game**" sufficient to avoid future ambiguity and dispute. Even the terms used in the '125 Patent's definition introduce ambiguity, as evidenced by the contradictory further qualifiers that the parties seek to introduce.

I recommend that "**video game**" in claim 39 be construed to mean "**A game run by a dedicated computer that has been hardwired with built-in permanent circuitry for the specific purpose of running games that use a video screen for a visual output. This "dedicated" computer is to be contrasted with a general purpose computer, such as a typical home personal computer or laptop computer. The computer may, but need not, be capable of performing other tasks.**"

Issue No. 2: “Electrically Connected”

Claim 39 uses the phrase “*electrically connected*” three times to describe the relationship between various claimed components (all emphasis added):

- a first microprocessor (140) *electrically connected* to one set of player controls (20), two player ports (A,B) and an oscillating circuit (Y1, C2, C3, R2);
- two player port logic circuits (108), 124) *electrically connected* between said first microprocessor (140) and the two player ports (A, B);
- a modem circuit (114) *electrically connected* to said first microprocessor (140) for bilaterally transmitting communication signals to and from said first microprocessor (140).

Hochstein contends that the phrase means “operatively connected to transmit signals” (Dkt. 478, p.10).

Microsoft contends the phrase means “a connection that is in the form of electrically conductive connectors.” (Dkt. 477, p.1).

This superficially straightforward phrase generates a dispute here because: (1) the ‘125 Patent discloses two forms of signal transmission, namely, electrical current signals via electrical conductors, and radio waves (the latter being disclosed as an alternative medium of communication between the local and remote video games); and (2) some of the accused products use radio waves (*i.e.*, wireless) communication between the player controls and the microprocessor, thereby raising an infringement issue with respect to the first above-quoted “*electrically connected*” limitation in claim 39.³

The ‘125 Patent specification uses “connected,” without the associated “electrically” qualifier, dozens of times to refer to connections that are by means of

³ See Hochstein, Dkt. 478, p.9. In the *Wilson* case there cited (fn.4), the Federal Circuit observed that “[w]hile a trial court should certainly not prejudge the ultimate infringement analysis by construing claims with an aim to include or exclude an accused product or process, knowledge of that product or process provides meaningful context for the first step of the infringement analysis, claim construction.” *Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1326-1327 (2006).

current-carrying conductors, as verified by the patent drawings.⁴ “***Electrically***

connected” (or “electrically connecting”) is used just four times outside of the claims:

- “Apparatus and Method for ***Electrically Connecting*** Remotely Located Video Games” (this title appears on the front page and again at the top of column 1);
- “A video game communicator (100) is ***electrically connected*** between the ports (A,B) of a local video game (12) and one set of player controls (20) of the local video game (12)” (first two lines of the Abstract); and
- “The video game communication assembly 100 includes control means 106 for controlling command signals received from second port means 107, which is ***electrically connected*** to one player input control 20, and for creating communication signals therefrom.” (3:51-55).

Hochstein contends that the specification uses “connected” and “***electrically connected***” interchangeably. He points to two examples. First, “[o]ne of the player input controls 20 is connected to the video game communication assembly 100” (3:32-34, emphasis added), and “[t]he video game communication assembly 100 includes control means 106 for controlling command signals received from second port means 107, which is ***electrically connected*** to one player input control 20” (3:51-54, emphasis added). Second, claim 39 specifies that the player port logic circuits (108, 124) are “***electrically connected***” to the microprocessor (140), while switch (150) is “connected” to the same microprocessor, these two connections being represented identically (by solid line connections) in Figure 3 (Dkt. 478, p.6). These examples of allegedly interchangeable use, however, both describe connections that are illustrated in the patent solely as electrically conductive paths, *i.e.*, through a wire or cable, with no explicit or implicit suggestion that the signals or data could instead be transmitted by radio waves. Therefore, they do not support Hochstein’s contended claim construction (*i.e.*,

⁴ That single-word term is used 26 times in column 7 alone.

“operatively connected to transmit signals”), which seeks to generically cover signal transmission via electrical conductors as well as via radio waves.

Hochstein contends that the title of the patent, “Apparatus and Method for *Electrically Connecting* Remotely Located Video Games,” confirms that “connected” and “*electrically connected*” mean the same thing in the ‘125 Patent, because the patent identifies two ways, telephone wires or radio waves, to accomplish that specific “electrical connection” (Dkt. 478, p.6). Therefore, Hochstein’s argument is that radio waves are one form of “electrical connection” (*Id.* at p.7).

Based upon the authorities cited by the parties concerning the weight to be given to the title of a patent in claim construction matters, this argument is entitled to little if any weight. In the first case cited by Hochstein, the court found that not only the title, but also the summary of invention, preferred embodiments and claim preamble, all supported the conclusion that a particular term should be a limitation of the claim. Thus the patent’s title *per se* was given little if any weight. *Poly-America, L.P. v. GSE Lining Technology, Inc.*, 383 F.3d 1303, 1310 (Fed. Cir. 2004). In the second case, the court referred to the title as consistent with the specification, but relied instead on consistent use of the terms in question throughout the specification. *Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1270-72 (Fed. Cir. 2001).

More to the point about lack of probative value of the title *per se* is a case cited by Microsoft. In *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1312 (Fed. Cir. 1999), the Court held that the purpose of a patent’s title “is not to demarcate the precise boundaries of the claimed invention but rather to provide a useful reference tool for future classification purposes.” Continuing, “[t]he near irrelevancy of the patent title to

claim construction is further demonstrated by the dearth of case law in which the patent title has been used as an aid to claim construction.” In the only case the Court was aware of, the claim construction was not based upon the patent title, but upon the specification and prosecution history. (*Id.* at 1313).

Aside from the patent title, the fact is that there is nothing in the ‘125 Patent specification stating or even suggesting that radio waves were considered by the patentees to be a form of “*electrical connection*.” The only reference to “radio waves” (or to possibly synonymous terms such as “electromagnetic radiation” or “wireless”) appears in the brief suggestion that radio waves could be substituted for the telephone line as the transmitting medium between the local and remote video games:

In the preferred embodiment, the transmitting medium is the telephone system 110, represented in the Figures as a telephone line 110. It should be obvious to those skilled in the art that any medium of transmission, i.e., radio waves, would be suitable for the subject invention 100 but there is a reduction in cost due to the elimination of a set of transmitters and receivers by using the telephone system 110.

‘125 Patent specification, 4:10-17 (emphasis added).

Hochstein points to general statements in the specification as support for extending “*electrically connecting*” to controllers connected to the video game by radio waves (Dkt. 478, p.9):

- In the same vein, the actual connections of the subject invention 100 to the player input controls 20 and the input ports A,B will vary depending on the type of game used (4:27-30).
- Player controls which relay player commands to the game are normally connected by means of removable cables (1:25-27, emphasis added).

In this regard, Hochstein cites evidence that in 1989 (two years before the ‘125 Patent’s filing date) Nintendo had introduced a wireless controller for its popular NES video game

system (Dkt. 478, Exh. C), and the ‘125 Patent inventors developed their prototypes for that game (*Id.*, Exh. D). These general statements, even supplemented by the Nintendo evidence, are insufficient to constitute a patent disclosure wireless controllers, and even more inadequate to constitute a clear redefinition of the customary and ordinary meaning of “*electrically connected*.”

Hochstein also points to statements in each of the earlier Special Master Reports (both adopted by the Court) to support his proposed construction of “*electrically connected*”:

- Electrical connections are usually understood in the sense of being operatively connected in some way, possibly with the presence of intervening circuit elements (Janicke Rep., Dkt. 257, ¶63).
- “[P]layer port logic circuits” . . . should be construed to mean: “Logic circuits operatively associated with the player ports . . .” (Grauer Rep., Dkt. 367, p.3, ¶4).

The Janicke quote was made in the course of his claim construction of “a switch (15) *connected* to said first microprocessor (14)”. He was responding to the issue of whether the claim language required a direct connection between the two elements; he was not considering the question of whether radio waves are a form of “*connection*” or “*electrical connection*.” The Grauer quote was part of his claim construction of “player port logic circuits (108, 124) *electrically connected* between said first microprocessor (140) and the two player ports (A, B).” He was responding to Microsoft’s contention that “player port logic circuits” was itself was indefinite unless limited to “shift registers;” he was not construing “*electrically connected*,” and he was not considering the question of

whether radio waves are a form of “**connection**” or “**electrical connection**.”⁵ These portions of the earlier Special Master Reports are therefore not relevant to the present issue.

Hochstein argues that to construe “**electrically connected**” to cover only paths that conduct electrical current would improperly exclude a preferred embodiment of the ‘125 Patent, a construction that “is rarely, if ever, correct.” Dkt. 478, p.8, citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). Specifically, Hochstein refers to the preferred embodiment of telephone lines and the alternative use of radio waves as the media for “**electrically connecting** remotely located video games” (to quote from the patent’s title). In the case of telephone lines as the medium for transmitting the signals, communication couplers L1,L2 are used “for **connecting** said voice over data circuit (134) to the medium of communication” (quoting from claim 39, emphasis added). These couplers are disclosed as inductors that transmit signals across a gap via magnetic inductance rather than the flow of electric current. See, Grauer Report, Dkt. 367, pp.24-27. In the case of the radio waves, the signals are transmitted via electromagnetic radiation.

The flaw in Hochstein’s argument is that only the patent’s title uses the term “**electrically connected**” to describe the relationship between “remotely located video games.” As discussed above, the use of the title of a patent as an aid to claim construction has been essentially rejected by the Federal Circuit. Furthermore, the ‘125 Patent uses the terms “couples” or “**connects**” (or other forms of the same roots), not

⁵ The substitution of “operatively associated” for “**electrically connected**” in that construction of a different claim limitation was therefore *dictum*. “Operatively” is a broad-scope term “often used descriptively in patent drafting to mean ‘effectively’ in describing the functional relationship between claimed components.” *Cross Medical Products v. Medtronic*, 424 F.3d 1293, 1306 (Fed. Cir. 2005).

“electrically connected” (the term in dispute), to describe the signal transmission across the air gap within communication couplers L1,L2 (4:17-21; 8:45-49; 14:6-8).

Microsoft initially states that the basis for its contended construction of **“electrically connected”** as “a connection that is in the form of electrically conductive connectors” is that it was set forth in Grauer’s Special Master Report (Dkt. 477, p.1, citing Dkt. 367, p.30). That statement was a fragment of that Report’s construction of “communication couplers,” wherein the complete statement was: “The use of ‘communication couplers’ in claim 39 also stands in contrast with the frequent use, in the same claim of **‘electrically connected’** to describe connections that are in the form of electrically conductive connectors” (underlining in original, other emphasis added). While I stand by that statement, it was not a formal or complete construction of the term in question, and is therefore *dictum*.

Similarly, Microsoft relies on several other statements from the earlier Grauer Report, the context of which was a general description of the patented subject matter or a formal claim construction of other claim limitations (Dkt. 477, pp.3-7). Furthermore, I was not informed at that time that **“electrically connected”** was a disputed term, or that it would be subject to the rigorous criteria of a later *Markman* proceeding. In any event, those statements are *dictum* and will not be further considered here.

Microsoft provides a technical dictionary definition that is relevant to the present issue:

electrically connected – Joined through a conducting path or a capacitor, as distinguished from being joined merely through electromagnetic induction. MODERN DICTIONARY OF ELECTRONICS, Robert F. Graf, 7th ed. (1999), at p.235, attached as Exh. 2 to Dkt. 477.⁶

⁶ The identical definition appears in the more timely 1974 RADIO SHACK DICTIONARY OF ELECTRONICS, by the same author (4th ed.), at p. 181.

This definition is an appropriate starting point for present purposes.

However, to avoid any potential issues concerning signals transmitted by ‘wireless or radio wave media, it would be advisable to supplement it by the following addition to the “as distinguished” portion,: “as distinguished from being joined merely through electromagnetic induction or waves” (emphasis added).

Microsoft asserts that “electrically connected” is an example of a term covered by the Federal Circuit’s observation in *Phillips*:

In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.

415 F.3d at 1314.⁷ I agree. Nevertheless, it is prudent to conduct the foregoing more comprehensive analysis.

On the basis of the foregoing analysis, it is my recommendation that the term “*electrically connected*” in claim 39 be construed to mean: “**Joined by an electrically conductive connector or a capacitor, as distinguished from being joined merely through electromagnetic induction or waves.**”

Issue No. 3: “Channel”

The term “*channel*” does not appear in claim 39, or anywhere else in the ‘125 Patent. It does appear, however, in Special Master Janicke’s Report as part of his construction of the claim limitation “voice over data circuit,” as follows:

8. In claim 39, “voice over data circuit” should be read to mean any circuit that allows transmission of voice signals and communication

⁷ In this regard, Microsoft cites a generally consistent definition from a general purpose dictionary: “**Electrical**: of, relating to, or operated by electricity <an *electric* current>.” MERRIAM-WEBSTER ONLINE DICTIONARY, www.m-w.com, attached as Exh. 3 to Dkt. 477.

signals over the same transmission ***channel***. There is no requirement that either type of signal be eliminated from further processing.

Dkt. 257, ¶8 (emphasis added). That construction has been adopted by the Court (Dkt. 241). Because the parties disagree as to the meaning of “***channel***,” the Court ordered that this term be included as part of the present claim construction proceedings. There is no conventional “intrinsic” evidence to guide this analysis, because the term is totally absent from the ‘125 Patent and prosecution history. The task at hand, therefore, is to determine what Special Master Janicke meant by his use of the term. It is my view that his Report provides the most probative guidance, as it is the only “intrinsic” evidence for Paragraph 8 in this unusual situation.

Hochstein contends that “***channel***” means “the wire, radio waves, or other medium used to transmit signals to and from the local video game system” (Dkt. 478, p.5).

Microsoft contends that “***channel***” should be defined as “a path for conveying electrical or electromagnetic signals, usually distinguished from other parallel paths” (Dkt. 477, p.9). Microsoft obtained this definition from *FCC Telecommunications: Glossary of Telecommunications Terms, June 1991*, attached to Dkt. 477 as Exh.6.

The most revealing clue to what Special Master Janicke had in mind when he used “***channel***” is found in Paragraph 19 of his Report. That paragraph has particular relevance because it is part of his analysis of the “voice over data circuit” limitation of claim 39, and it is his Paragraph 8 Recommendation concerning that claim limitation where his disputed use of “***channel***” appears. Paragraph 19 is reproduced in its entirety below, to show the full context of his use of “channel:”

19. When two types of information are transmitted in the same *channel*, some way of telling them apart at the receiving end is obviously needed. One way to do this is described in the preferred example disclosed in the patent's written description. It involves mixing voice and communication on the same telephone line at the same time. This procedure works well only if there is some reliable way to separate the two at the receiving end, and the patent gives the example of using filters for that purpose. Looking at the arrangement of Fig. 2 as being the receiving end, the voice signals coming in have been altered at their remote-end origin, so that they do not contain either of the two frequencies reserved for communication data in this example [footnote omitted]. In the arriving mix of signals, the two data-specific ones are allowed past the filters 136. The rest, corresponding to voice components, go to the speaker 128. In this manner interference between voice and data is prevented. This is an example of the well known principle of frequency division multiplexing (FDM), wherein unrelated signals of different frequencies can be sent on the same wire or channel at the same time and recovered and separated at the far end.

(all emphasis added). His references there to “transmitted,” the “receiving end,” “telephone line,” the “remote end,” “sent on the same wire or channel,” and the “far end” strongly suggest that his use of “*channel*” in this paragraph refers to the telephone line link between the local and remote video games, *i.e.*, the preferred embodiment of the “medium of communication” of claim 39.

Moreover, his alternative reference to “the same wire or *channel*” in the final sentence is particularly revealing. A single isolated wire cannot be a “*channel*,”⁸ unless it is part of a bundle of wires, in which case it can be a “*channel*” with respect to the combined signals transmitted by the bundle. A single isolated wire has no available parallel paths (*i.e.*, associated wires) to serve as channels for other portions of the total signal. This observation seems consistent with Microsoft's proffered definition, which states that a “*channel*” is a “path for conveying electrical or electromagnetic signals, usually distinguished from other parallel paths” (emphasis added). But a single wire can

⁸ A wire can be used to carry multiple *channels* of information (by using a signal multiplexing technique), but the wire itself is only one conduit that cannot be a *channel* unless it is part of a bundle of wires.

be a “medium of communication,” as in the case of the disclosed telephone line.⁹

Because the use of a telephone line is the patentees’ preferred embodiment of the “medium of communication” of claim 39, it is my opinion that Special Master Janicke was simply using “wire or *channel*” in Paragraph 19 as more colloquial substitutes for “medium of communication.”

I found four other paragraphs in his Report where he used the “*channel*” term. In the following excerpts from those paragraphs, all emphases are added:

- Rather, they send voice packets, then data packets, then back to the voice again, etc., as needed to complete all the transmissions in as short a time as possible. This technique has long been known in telemetry as time division multiplexing (TDM), where a single *channel* is switched from handling message #1 for a while, then message #2 for a while, then message #3 for a short while, then back to message #1 for another while (§21, regarding the accused products)..
- Implemented this way, the voice over data function is being carried out by frequency division multiplexing, where signals at different frequencies are mixed together at one end of the *channel*, and sorted out at the other (§31, regarding the operation of the patented system).
- The specification teaches, albeit in broad terms, an algorithm for what the microprocessor must do to accomplish voice over data: generate voice and communication signals at the sending end; send both types of signals over a common *channel* of communication; and separate out the signals at the receiving end so that voice and communication signals do not interfere with each other (§41, regarding operation of the patented system).
- Thus, in both defendants’ products, the broad algorithm disclosed in the patent is being carried out, combining voice and command data signals at the sending end, transmitting them over a single communication *channel*, and separating them at the receiving end (§46, regarding the accused products).

These four paragraphs are also helpful in the present analysis, because in each case “medium” (as used in the patent) appears to be more appropriate than *channel*.

Indeed, these uses of “*channel*” seem to be inconsistent with the FCC definition

⁹ I note that the patentees also used “medium” more generically at one point: “The cables 24, 26 are the medium through which video and audio signals pass, respectively [in Figure 1’s depiction of the prior art]” (3:13-14, emphasis added).

proposed by Microsoft, in that they all refer to transmissions along a single path where there are no parallel paths.

I have underlined “transmitting” and “transmission” where Special Master Janicke used those terms because those terms also appear several times in the ‘125 Patent in conjunction with “medium.” See, 2:24-25; 4:9; 4:10-11; 4:13-14; 9:7-8. Furthermore, claim 39 itself recites “a medium capable of transmitting . . . “ (13:31-32). I believe that the patent’s association of those two words provides another clue to Special Master Janicke’s use of “*channel*.” He jointly used a form of “transmit” with “*channel*” in Paragraphs 19, 21 and 46 (as highlighted above). Moreover, as in the patent, he jointly used “transmission” with medium in the initial portion of his Paragraph 69:

69. Hochstein correctly points out that there is nothing in claim 39 requiring the use of filters or frequency-division multiplexing, nor is there any requirement that the modem recited in the claim be positioned inboard of the voice-over-data circuit. In other words, the modem could be directly attached to the transmission medium, with the voice over data circuit inboard of it.

(emphasis added). The pertinence of his use of “transmission medium” in this passage is apparent when that passage is compared with his Paragraph 8, where the disputed word “*channel*” appears:

8. In claim 39, ‘voice over data circuit’ should be read to mean any circuit that allows transmission of voice signals and communication signals over the same transmission *channel*. There is no requirement that either type of signal be eliminated from further processing.

(emphasis added).

It therefore appears to me that Special Master Janicke mistakenly thought of and used the terms “*channel*” and “medium” interchangeably to refer to the means or instrumentality by which signals are transmitted between the local and remote video

games. Only he knows why he made the word choice that he did, but the circumstances lead me to conclude that, in the context of a long and complex Report, he casually chose “*channel*” (not found in the ‘125 Patent) rather than “medium” (the patent’s term) when he drafted Paragraph 8, with no apparent intent to convey any different meaning or significance by that choice.

I have considered Microsoft’s very detailed discussion of this issue. It appears to be an attempt to re-argue the proper construction of the “voice over data circuit” and “filtering” claim limitations, which have already been ruled upon by the Court. I did not find it helpful to the Court’s resolution of the question of what Special Master Janicke meant by his use of “*channel*” in Paragraph 8 of his Report. Microsoft’s proposed definition from the FCC Glossary, although satisfactory as a definition of “*channel*,” leads to an unnecessary diversion. In my opinion, it is more expeditious and appropriate to simply substitute the more relevant and accurate term, “medium,” for “*channel*” in Paragraph 8 of the Janicke Report, because (1) that is the term used repeatedly in the patent, (2) “*channel*” is not used in the patent, and its use as part of a claim construction may lead to further issues and diversions in subsequent proceedings in this case, and (3) the manner in which he used the terms in the cited paragraphs of his Report indicates he considered the two words synonymous.

On the basis of the foregoing analysis, I recommend that the term “*channel*” in Paragraph 8 of Special Master Janicke’s Report be replaced by “medium,” and that no formal construction of “*channel*” be conveyed to the jury. Alternatively, if the Court is not inclined to modify Paragraph 8 of the previously adopted Janicke Report I

recommend that “*channel*” be construed to mean: “**A path for conveying electrical or electromagnetic signals.**”

Dated: June 30, 2009

/s/ Richard D. Grauer

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ADDENDUM

Claim 39. A *video game* communications circuit for communicating command signals between a local *video game* having at least two player ports (**A, B**), at least one set of player controls (**20**), and at least one remote *video game* (**30**) in a medium capable of transmitting plurality of data signals and voice signals, said circuit comprising:

a first microprocessor (**140**) *electrically connected* to one set of player controls (**20**),

two player ports (**A, B**) and an oscillating circuit (**Y1, C2, C3, R2**);

two player port logic circuits (**108, 124**) *electrically connected* between said first

microprocessor (**140**) and the two player ports (**A, B**);

a switch (**150**) connected to said first microprocessor (**140**) having at least two positions;

a modem circuit (**114**) *electrically connected* to said first microprocessor (**140**) for bilaterally transmitting communication signals to and from said first microprocessor (**140**);

a voice over data circuit (**134**) for filtering voice signals from communication signals and for transmitting both to said modem circuit (**114**); and

communication couplers (**L1, L2**) for connecting said voice over data circuit (**134**) to the medium of communication.

CERTIFICATE OF SERVICE

I hereby certify that on June 30, 2009, I electronically filed the foregoing paper with the Clerk of the Court using the ECF system which will send notification of such filing to the following:

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